

A New Species of *Festuca* L. (Poaceae: Pooideae) from India

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A new species of *Festuca* L. (Poaceae), *F. sanjappae* K. Chandra Sekar & S. K. Srivastava, is described and illustrated from India.

Key words: *Festuca*, *Festuca sanjappae* K. Chandra Sekar & S. K. Srivastava, Himachal Pradesh, India, new species.

Festuca L. is represented by ca. 450 species in the world, mostly confined to temperate and tropical mountains (Mabberley 1998). In India the genus comprises 27 species mainly distributed from the Western to Eastern Himalaya from the temperate to the alpine zones. Of these, five species are endemic to India (Karthikeyan et al. 1989, Nair and Thomas 2002). The genus is characterized by perennial habit, paniculate inflorescence, 4–5-flowered spikelets, lemmas rounded on the back and linear helium running to the length of the caryopsis.

Festuca sanjappae was collected by one of the authors during survey and plant exploration in the remote localities of Pin Valley National Park, Himachal Pradesh. This plant was growing on exposed rocky slopes at an altitude of 4000–4100 m. Critical examination and perusal of the literature and herbaria reveal that the plant represents a hitherto unrecognized species. *Festuca sanjappae* closely resembles *F. alaica* but differs in a number of characters (Table 1).

The name of the new species honors Dr. M. Sanjappa, Director, Botanical Survey of India in recognition of his significant contribution to the Flora of India as well as to his

taxonomic research in the family Leguminosae.

Festuca sanjappae K. Chandra Sekar & S. K. Srivastava, sp. nov. [Fig. 1]

Festuca alaica Drobov, habitis vulgo dense caespitosis, perennibus, arhizomatibus; culmis erectis, folis sclerenchymatis laminae folii 3, spiculis 4–5-floribus affinis, sed culmis longioribus (35–43 cm), laminis foliorum complanatis, dorse sparse pubescentibus, ligulis longioribus (1–1.4 mm); paniculis longioribus (6.5–14 cm), ellipticis ad oblanceolatis; spiculis curtioribus (4–5.5 mm), lemmatibus ad parem superam pubescentibus, longiorio-aristatis (aristis 1.4–1.6 cm longis), antheris curtioribus, 0.3–0.4 mm longis, ovario hispidulo differt.

Typus: INDIA. Himachal Pradesh, Pin Valley National Park, Chhohem, 4000–4100 m. K. Chandra Sekar 103271 (holo CAL; iso BSD).

Densely tufted perennials. Culms erect, 35–43 cm high, 1–2.5 mm wide, terete, slender, sparsely hairy, yellowish green. Leaf blades flat, 6–10.2 cm long, 3–4 mm wide, sparsely hairy, 7-nerved, pale green, with 3

Table 1. Distinction between *Festuca alaica* Drobov and *F. sanjappae*, sp. nov.

| | <i>F. alaica</i> | <i>F. sanjappae</i> |
|-------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Culms | 14–30 cm high | 35–43 cm high |
| Leaf-blades | folded setaceous up to 7.5 cm long lower surface smooth or scabrid 5-nerved | flat 6–10.2 cm long lower surface sparsely hairy 7-nerved |
| Ligule | 0.3–0.6 mm long | 1–1.4 mm long |
| Panicle | oblong to narrowly oblong 2.5–6 cm long branches appressed to the main axis and scabrid | elliptic to oblanceolate 6.5–14 cm long branches not appressed to the main axis and sparsely hairy |
| Spikelets | 6–8 mm long | 4–5.5 mm long |
| Lemma | scabrid in the upper part awn 1–1.5 mm long | hairy in the upper part awn 1.4–1.6 cm long |
| Palea | 1.7–2.5 mm long | 3.2–3.8 mm long |
| Anthers | 1.7–2.5 mm long | 0.3–0.4 mm long |
| Ovary | glabrous | hispidulous |

sclerenchyma strands. Ligules 1–1.4 mm long, whitish. Panicle elliptic to oblanceolate, 6.5–14 cm long, 1.5–2.5 cm wide, contracted, pale green; the branches ascending, 1.5–2.3 cm long, 0.5–0.8 mm wide, sparsely hairy, pale green. Spikelets ovate-lanceolate to elliptic-ovate, 4–5-flowered, 4–5 mm long (excluding awns), 1.8–2.2 mm wide, yellowish green. Lower glume 3.7–4 mm long, 0.8–0.9 mm wide, shortly acuminate, 1-nerved, pale green; upper glume 4–4.5 mm long, 0.9–1 mm wide, acuminate, 3-nerved, pale green. Lemma ovate to elliptic-lanceolate, slightly two lobed at the tip, 3.9–4.2 mm long, 0.9–1.1 mm wide, hairy in the upper part, pale green; hairs 0.3–0.5 mm long, yellowish white; awn 1.4–1.6 cm long, 0.3–0.8 mm wide, pale green-yellow. Palea lanceolate, 3.2–3.8 mm long, 0.5–0.8 mm wide, 2-keeled, keels scabrid. Anthers linear, 0.3–0.5 mm long, ca. 0.3 mm wide. Ovary obovate-oblanceolate, 1–1.3 mm long, 0.7–0.9 mm wide, hispidulous in the upper part. Lodicules elliptic-obovate, 0.2–0.35 mm long, 0.1–0.2 mm wide, glabrous. Caryopsis 3–3.5 mm long, 1–1.8 mm wide, brown-black.

Flowering and fruiting: June–August.

Ecology: Growing on exposed rocky slopes at an altitude of 4000–4100 m.

Distribution: India, Himachal Pradesh (Pin Valley National Park).

Note: *Festuca sanjappae* is closely allied to *F. alaica* Drobov in general appearance having densely tufted perennial habit without rhizomes; erect culms; leaf blades with 3-sclerenchyma strands and 4–5-flowered spikelets but differs from the latter in having longer culms (35–43 cm); leaf-blades flat, sparsely hairy at lower surface, ligules longer (1–1.4 mm); panicle longer, elliptic to oblanceolate; spikelets short (4–5.5 mm); lemma hairy on upper part with longer awn (1.4–1.6 cm); palea longer (3.2–3.8 cm); anthers short 0.3–0.4 mm long with hispidulous ovary.

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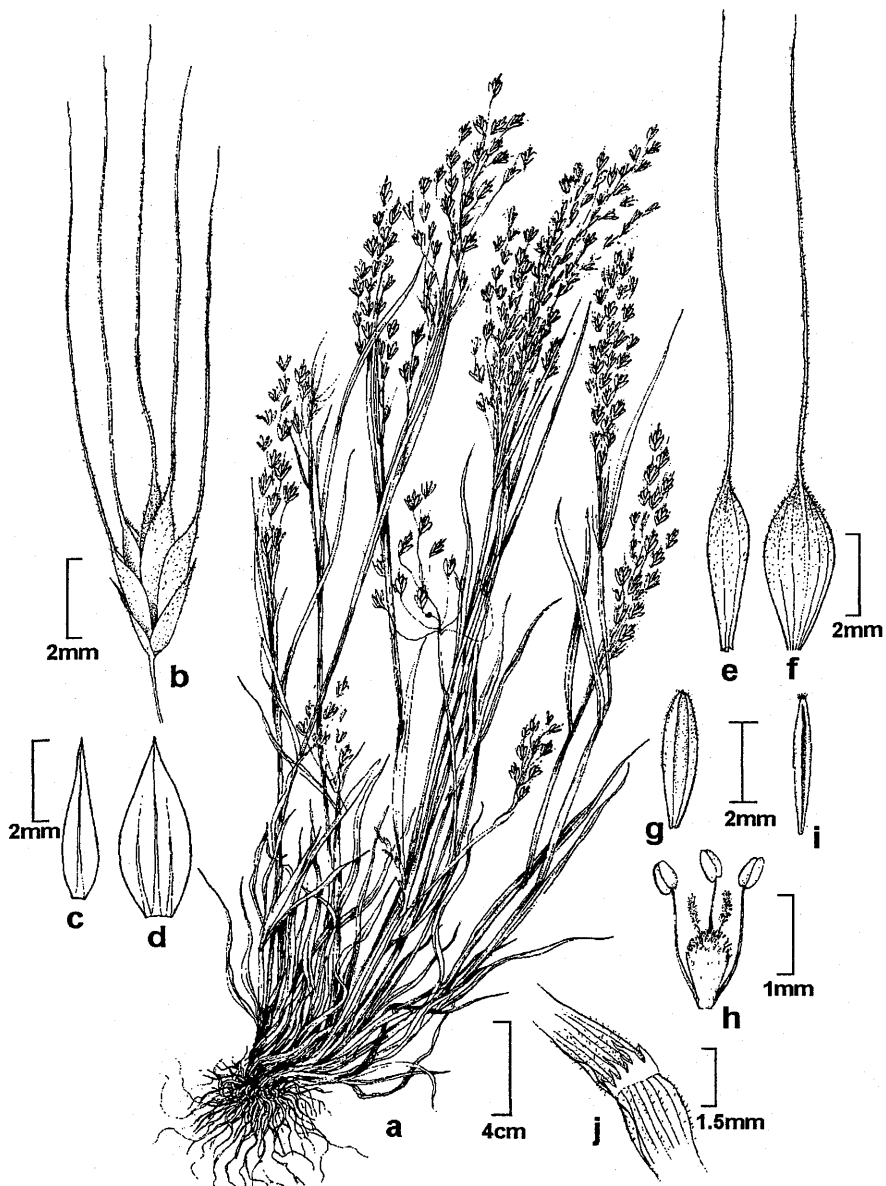


Fig. 1. *Festuca sanjappae* K. Chandra Sekar & S. K. Srivastava. a. Habit. b. Spikelet. c. Lower glume. d. Upper glume. e. Lemma from the side view. f. Lemma. g. Palea. h. flower. i. Caryopsis. j. Ligule (voucher: K. Chandra Sekar 103271).

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- K. チャンドラ スカール, S. K. スリヴァスタヴァ: インド産ウシノケグサ属 (イネ科イネ亜科) の 1 新種
インド・ヒマチャルプラデシュ州 Pin Valley 国立公園からイネ科ウシノケグサ属の新種, *Festuca sajappae* K. Chandraskar & S. K. Srivastave を記載した. *F. sanjappae* は *F. alaica* Drobov に似ているが, 稈が長く, 葉身は平滑で下面にまばらに毛があり, 葉舌が長く, 総状花序はより長く楕円形ないし倒披針形となり, 小穂は短く, 外穎は上部が有毛で長い芒があり, 内穎はより長く, 葯は短く, 子房に短毛がある点で異なる.
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